

# UZBEKISTAN WIND AND SOLAR POWER COMBINED



What is the new power plant in Uzbekistan? In November 2022, Uzbekistan unveiled a new power plant in the Syrdaryo province's Khovos district that will extend its generating capacity. The power plant will have the capacity to generate up to 1.7 billion KWh of electricity annually once it is fully operational.



Can Uzbekistan use solar energy? In fact, solar energy's technical potential is almost four times the country's primary energy consumption. Its favourable climate and geographical location would allow Uzbekistan to use solar energy for a wide range of industrial purposes. Wind energy potential totals 2.2 Mtoe, with 19% technical development possible.



How much electricity does Uzbekistan generate? According to the Ministry of Energy, Uzbekistan's new power plant in Khovos, Syrdaryo, can generate up to 1.7 billion KWh of electricity every year. In 2021, Uzbekistan generated 70.1 Gwh of electricity, as reported in BP's statistical review.



How can Uzbekistan meet its energy needs? Uzbekistan is capable of meeting its energy needs from its own energy resources. Uzbekistan owns a significant part of the installed capacity of the united power system of Central Asia.



What is the power generation mix in Uzbekistan? In Uzbekistan, the power generation mix consists of thermal power plants with a total capacity of 10.6 GW, producing approximately 90% of the total electricity. The primary energy used in these thermal power plants for electricity and heat production is dominated by gaseous fuels, accounting for 94%. Fuel oil accounts for 2%, and coal accounts for roughly 4%.

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Who owns the energy sector in Uzbekistan? The governmentowns and manages the energy sector in Uzbekistan. The Joint Stock Company-Uzbekenergo,a vertically integrated and publicly owned monopoly (in charge of electricity generation,transmission,and distribution),operates under the supervision and regulation of the Cabinet of Ministers.



The Nukus wind farm is ACWA Power's fourth project in Uzbekistan, after the US\$1.2 billion Sirdarya project, which is a 1500 MW Combined Cycle Gas-Turbine (CCGT) power plant, the 500 MW Bash facility and the US\$1.3 billion Djankedly wind power project in Bukhara.



Solar Energy Policy in Uzbekistan: A Roadmap - Analysis and key findings. A report by the International Energy Agency. The project consists of 1 MW solar PV, 4.1 MW wind power, 1.5 MW/0.49 MWh battery and other integration ???



Each sub-project comprises of 500MW wind power plant and 100MW BESS, with commissioning planned in Q2 2028. The projects in Samarkand and Kungrad have a combined investment value of USD 4.2 billion and are among the largest clean energy and storage projects in Uzbekistan.



The USD 4.2 billion projects have a combined generation capacity of 2.5GW and 968MW of battery storage; Riyadh, Kingdom of Saudi Arabia: Saudi-listed ACWA Power, the world's largest private water desalination company, leader in the energy transition and first mover into green hydrogen, recently signed a joint development agreement with Japan's Sumitomo ???

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ACWA Power has concluded the sale of 35 per cent of its ownership in the ACWA Power Bash Wind Project Holding Company Limited and ACWA Power Uzbekistan Wind Project Holding Company Limited to China Southern Power Grid International (HK) Co. Limited.



In addition to Nur Navoi, the subsidiary of Emirati sovereign investor Mubadala Investment Co is also working on three PV projects with a combined capacity of 897 MW and a 500-MW wind farm. Overall, Masdar has a wind and solar portfolio with a total capacity of around 2.5 GW in the country, CEO Mohamed Jameel Al Ramahi said.



Moreover, several other solar power projects, with a combined capacity of over 2 GW, are currently in the pipeline. The wind energy sector has also seen significant growth, with the country's first wind farm, the 100 MW Karakalpakstan Wind Farm, set ???



POWERCHINA previously built Uzbekistan's first large-scale solar and wind power projects. The Navoi 100 MW Solar Power Plant, with 298,928 solar panels and generating 278 million kilowatt-hours of electricity annually, was connected to grid on Aug 27, 2021, under the witness of Shavkat Mirziyoyev, president of Uzbekistan.



Shanghai-based green technology company Envision Energy on Tuesday said it has secured a deal to deliver turbines for 1 GW of wind projects under development in Uzbekistan by Saudi Arabia's ACWA Power.

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Uzbekistan wants to generate 35% of its electricity from renewable sources by 2030, equating to 15,000 MW divided into 10,000 MW of solar power and 5,000 MW of wind power. By incorporating BESS into the grid, Uzbekistan will soon have the largest battery energy storage facilities in the region which will play a crucial role in stabilising the



Although the ISCC system is an efficient power generation technology, it is still facing several obstacles to safe operation and stable power supply caused by the intermittence of solar energy [17, 18] integrating solar field with the bottom cycle, the output power of the bottom cycle will be increased with the rising of solar energy input [19].



Furthermore, the Bash and Dzhankeldy wind power plants have a combined capacity of 1 GW and an investment of exceeding \$1.3 billion. Earlier this month, ACWA Power completed the dry financial close for the Tashkent Riverside ???



The Nukus wind farm is ACWA Power's fourth project in Uzbekistan, after the US\$1.2 billion Sirdarya project, a 1500 MW combined cycle gas turbine power plant, the 500 MW Bash facility and the US\$1.3 billion Djankedly wind power project in Bukhara. The project seeks to bolster the Uzbekistan government's efforts to diversify the country's



Expanding Uzbekistan's wind energy sector The Bash wind power plant will generate more than 1,650 GWh of electricity annually and projects include the construction and installation of 160 km of transmission infrastructure. Combined, the plants will reduce CO2 emissions by 1.8 billion tonnes. the country plans to add 3 GW wind and 5 GW

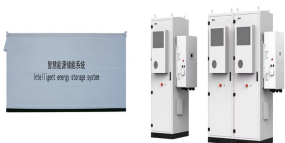
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Jeddah, Kingdom of Saudi Arabia, August 18, 2022: ACWA Power, a leading Saudi developer, investor, and operator of power generation, water desalination and green hydrogen plants worldwide, signed three major agreements with the government of the Republic of Uzbekistan. The first involves a Heads of Terms agreement for the development of a 1.5GW wind farm in ???



Uzbekistan's Samarkand and Jizzakh solar power plants have commenced operations, marking a milestone in the nation's energy transition. The two plants, boasting a combined installed capacity of 511MW, have recently connected their initial units to the grid for power generation.



After rolling out its renewable energy strategy through 2019 in April, the Central Asian Republic of Uzbekistan has set its sights on ambitious goals: Build three 100-MW solar power plants and generate more than 1 trillion kWh of electricity from dozens wind farms. The forecast potential for wind power capacity in 2019 is 520,000 MW.



In order to ensure the implementation of these projects, 15 decrees were signed by the President of the Republic of Uzbekistan. In particular, 19 solar photovoltaic projects with a total capacity of 3,977 megawatts and 7 wind power plants with a total capacity of 3,100 megawatts are being implemented.



Another second set of projects includes Kungrad 1, 2 and 3 wind projects, located in the Republic of Karakalpakstan in Uzbekistan. Each sub-project comprises of 500MW wind power plant and 100MW BESS, with commissioning planned in Q2-28. The projects in Samarkand and Kungrad have a combined investment value of \$4.20 billion.

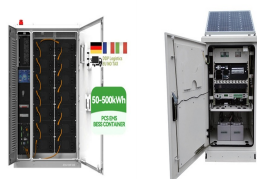
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of solar energy in Uzbekistan, the report presents a roadmap for solar energy by 2030. It provides examples of international best practices in solar energy deployment from IEA member and association countries.



The wind farm will consist of three 500MW wind power projects operated by three subsidiaries, namely ACWA Power Kungrad Wind 1, ACWA Power Kungrad Wind 2, and ACWA Power Kungrad Wind 3. The Kungrad ???



As of 6 November 2024, Uzbekistan's solar and wind power plants have generated 4.19 billion kWh of electricity, including 3.65 billion kWh from solar plants and 543.7 million kWh from wind farms. This output has helped save ???



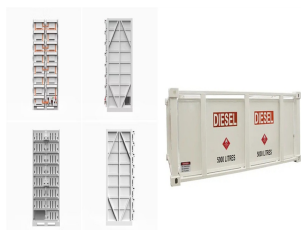
ACWA Power divests 35 per cent stake in Bash and Dzhankeldy wind power plants in Uzbekistan July 19, 2024 ACWA Power has concluded the sale of 35 per cent of its ownership in the ACWA Power Bash Wind Project Holding Company Limited and ACWA Power Uzbekistan Wind Project Holding Company Limited to China Southern Power Grid ???



Uzbekistan has a very high potential in the use of renewable energy sources. According to the estimates of the International Energy Agency and the United Nations Economic Commission for Europe, Uzbekistan has a combined renewable energy potential for electricity production of 2,091 billion kWh (30 times higher than annual consumption). And in recent ???



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French renewables company Voltalia SA (EPA:VLTSA), UAE's Masdar and a consortium of GD Power and Powerchina have been selected in a tender in Uzbekistan to build three solar parks in the Central Asian country with a combined capacity of 500 MW.



Riyadh, KSA: December 27, 2022: ACWA Power, a leading Saudi developer, investor, and operator of power generation, water desalination and green hydrogen plants worldwide, signed on December 23, 2022, the power purchase agreements (PPAs) and investment agreements (IAs) with the government of the Republic of Uzbekistan to develop the 1.5 GW Kungrad wind farm ???



Under its renewable energy program, Uzbekistan aims to deploy 5 GW of solar and 3 GW of wind power capacity by 2030, as it targets meeting 25 percent of electricity needs from renewable sources by that year. This month, Uzbekistan's Energy Ministry said it was considering raising the energy targets to 7 GW for solar and 5 GW for wind power.



The wind farm will consist of three 500MW wind power projects operated by three subsidiaries, namely ACWA Power Kungrad Wind 1, ACWA Power Kungrad Wind 2, and ACWA Power Kungrad Wind 3. The Kungrad wind farm is expected to be valued at \$2.4bn. Each of the three projects is expected to include a battery energy storage system with a capacity of



UAE's AMEA Power energy company is going to invest in the construction of wind and solar power plants in Uzbekistan, boasting a portfolio of projects with a combined capacity of over 6 GW of

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Uzbekistan aims to raise the solar and wind capacity to 8,000 MW by 2026 and expects foreign direct investments (FDIs) of US\$3bn over the 2022-2024 period to finance at least 10 solar and wind projects with a combined capacity of 3,000 MW. In 2022, five solar projects totalling 900 MW should be awarded through tenders in the Khorezm, Bukhara, Kashkadarya, ???